

**Application of Web 2.0 tools in Delivering Library Services: A Case of
selected Libraries in Tanzania**

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Abstract:

This paper explores the adoption and application of Web 2.0 tools in delivering library services in selected libraries in Tanzania. The paper investigates the ways in which librarians are adopting the tools to enhance services. The study examines Web 2.0 tools used by libraries in delivering their services, factors influencing the use of Web2.0 tools, challenges and prospects in their usage.

The findings reveal that librarians in Tanzania have started using various Web 2.0 tools in varying degrees and the most common tool is Facebook. The findings also reveal that most librarians are motivated to use these tools because they are free and open source and relatively easy to apply. Sharing resources, communication and promotion of services were the main reasons why this tools are used. Challenges include unreliable power and internet access. Advantades included, increase in resources awareness, better communication and interest in library usage. Recommendations suggest that institutions should develop policies that adopt the use of emerging technologies and alternatives to reliable power sources such as solar and generators.

Key words: *Web 2.0, Web 2.0 tools, Librarian 2.0, libraries*

1.0 INTRODUCTION

The applications of ICT technologies have broadened the walls of the libraries. The resources of the libraries have changed from physical to virtual objects, from card catalogue to online public access catalogues (OPACs), and cooperative cataloguing to social cataloguing with an ability to comment, review and re-use with the application of web 2.0 tools . These tools have enabled a collaborative process where patrons can catalogue the resources they use and can share that information by inviting others to view, comment, rate and give feedback. Web 2.0 plays key roles in dispensation of information, knowledge and communication services in university libraries .

Librarians and library users are struggling to acquire skills to effectively utilize web 2.0 tools for creating online catalogues, social bookmarking, collaborating and sharing content. Beneficiaries of Web 2.0 technology have no regrets since the advantages override its disadvantages.

Considered by many as the person who coined the word Web 2.0, defines Web 2.0 as a set of economic, social, and technology trends that collectively form the basis for the next generation of the Internet—a more mature, distinctive medium characterized by user participation, openness, and network effects. The specific technologies and tools of these new developments are collectively known by the name Web 2.0.

Web 2.0 tools such as weblogs, wikis, podcasts, RSS feeds, photo-sharing, social bookmarking, collaborative document tools, instant messaging, mash-ups and now social media networks have proved worthy for Librarians to exploit thus this paper will look at ways in which Librarians in Tanzania are adopting some of these tools and determine how they have improved service delivery recently.

1.1 ENABLING ENVIRONMENTS

1.1.1 ICT Policies

ICT initiatives in Tanzania include development of relevant government policies to integrate ICT into different economic sectors. For example Tanzania's Vision 2025, National ICT policy (2003), ICT policy for Basic Education (2007). Other relevant programmes geared towards the same include opening tele-centres in rural Tanzania and the rural electrification programme undertaken by Tanzania Electric Supply Company (TANESCO) to increase the number of connectivity to the national grid for development.

1.1.2 COMMUNICATION INFRASTRUCTURES

In July, 2009 H.E President Jakaya Kikwete witnessed the launch of the first ever fibre optic cable network in Tanzania and indeed the entire region of Eastern Africa. Since the arrival of this undersea cable and successive two other cables by TEAMS and EASSy, internet users now enjoy enhanced speeds, reduced prices almost 50-60% and a tremendous growth in mobile phone usage. According to (Internetworldstats.com), internet subscribers in Tanzania have increased from 115,000 in 2000 to a whopping 4.9m in December 2011 as indicated in Table: 1 below.

	Population (2011 Est.)	Internet Users Dec/2000	Internet Users 31-Dec-11	Penetration (% Population)	Users %
Tanzania	42,746,620	115,000	4,932,535	11.5 %	3.5 %

Table: 1 Internet penetration in Tanzania

Improved growth in the sector has also led to increase of internet and telephone operators as indicated Table 2 below:

Table: 2 Telephone and Internet operators

Telephone and Internet operators	2006	2010
Fixed Landline	2	2
Mobile operators	5	10
Data operators and Internet service providers	25	80
Total	32	92

Source: Tanzania in Figure 2010

1.1.3 Mobile subscribers

There has been massive increase in mobile subscriber base in Tanzania from 36,143 in 1998 to 20,984 million users in 2010 (Tanzania in figures 2010, 2011). While the mobile phone usage has taken an upward trend, landline usage has stagnated as confirmed by the following figures. In 1998, 121,769 subscribers used landline phones in Tanzania while 181,671 subscribers in 2009 had landlines. In 2010 the figure dropped to about 174,511, showing clear preference for the more modern and prestigious mobile telephony.

1.2 WEB 2.0 INITIATIVES IN TANZANIA

The importance of Web 2.0 tools cannot be under estimated in the wake of improved internet access and reduction in costs of mobile technologies. Many Tanzanians estimated at

20.984m now own at least a mobile phone. The government has also enabled some level of growth in ICT development and training. Policies that were meant to streamline ICT in various sectors of the economy were developed and continue to be developed and reviews carried out to determine trends and adjustments to be undertaken to improve them (Materu-Behitsa, M and Diyamett, B. D, 2010). Some positive impacts out of these policies and ICT frameworks involved reduction in costs of ICT related hardware, liberalization of the ICT sector and encouragement of private investment in the sector.

However, a lot more still needs to be done for Tanzanians to cope effectively in the region.

In Tanzania there has been a slow start to the use of Web 2.0 tools (Lwoga, 2012) and the tools penetration has yet to reach the levels expected that they can be implemented to help in service delivery in teaching, Library services and even dissemination of pertinent information such as Health, Hygiene, HIV/AIDS etc.

The following activities being undertaken can create awareness, develop interest and encourage use for specific purposes. Technical Centre for Agriculture and Rural Cooperation EU-ACP has organized a series of trainings on Web 2.0 tools in Tanzania in collaboration with University of Dares salaam. The aim is to introduce Tanzanians in the Agricultural sectors to harness web 2.0 tools for dissemination of useful information. Likewise, Muhimbili University of Health and Allied Sciences (MUHAS) organized a web 2.0 workshop for Health Scientists in Tanzania in collaboration with INASP. Tanzania hosted the 6th International conference on ICT for development, Education and Training in May 2011. Tanzanians used this forum to interact and share experiences with other delegates.

Web 2.0 applications in the promotion of teaching, learning and communication was also discussed in details. Tanzania Library Association (TLA) also organized a 3 day workshop in June 2011 in Dodoma for its members on the role of Web 2.0 tools for adoption and use in libraries countrywide.

Being freely open source and easy to adopt the tools can revolutionize provision of services and lead to rapid growth of knowledge acquisition.

Knowledge is the modern economic resource, as espoused by management guru Peter Drucker thus “The basic economic resource is no longer capital, nor natural resources, nor labor. It is and will be knowledge.” Peter Drucker, 1995 (Management Consultant)

2.0 LITERATURE REVIEW

2.1 WEB 2.0

Web 2.0 has been described in different ways. Some perceive it as a community-driven communication system rather than technology driven, other perceive it as a second generation of web based tools and service. refer the term Web2.0 to the development of online services that encourage collaboration, communication and information sharing which represents a shift from the passive experience of static “read only” web pages to the participatory experience of dynamic and interactive web pages. In other words, Web2.0 reflects changes in how we use the web rather than describing any technical or structural change. Interactivity and collaboration in creation and dissemination of content are key characteristic of this technology that is everybody is a sender and receiver of information at a time. Web2.0 as opposed to ready-only web technology in the first generation of the web, is not so much defined by speed or infrastructure, but how content is created, distributed, and disseminated, and how people interact with that content and each other through a whole new generation of Web platforms and tools .

2.2 LIBRARY 2.0

Library 2.0 is the product of application of web 2.0 tools in libraries. Library 2.0 was first coined by Michael Casey in his blog Library Crunch . Casey predicted a transformation of librarian’s role and library services that the shift would result in taking the traditional library to the next level of course the virtual library.

According to the use of Web2.0 tools in library activities is known as Library 2.0.

Library 2.0 is a new way of thinking about libraries first and fore most, it follow what call underlying golden rule that is dynamically interacting with and listen to users to create more user-centered services both physical and technology related and second the willingness to enhance library services through user collaborations.

says Library 2.0 isn’t solely about technology but it is the services that matters. They added that “Library 2.0 simply means making the library’s space (virtual and physical) more interactive, collaborative, and driven by community needs.” Development of the library and information services through user participation is the key feature of library 2.0 where constant updates and evaluation of library services are ensured to better serve the needs,

demands, desires and wisdom of user communities. .

2.3 WHY USE WEB 2.0 TOOLS IN LIBRARIES?

These tools have penetrated all facets of communications including business, social, scholarly, health and many more. Libraries need a communication strategy which is cost effective and convenient both to users and service providers. capitalize the importance of integrating web 2.0 systems into mainstream library and information services as it support, promote and extend information services to patrons or user community. In the modern knowledge and learning environments, university libraries have to be technology-reliant and compliant . According to Makori, the development of web 2.0 services in university libraries in Africa has been very slow. This situation can be supported by the fact that internet users and penetration are 6.2% and 13.5% respectively . Internet use and penetration have a direct relationship with the adoption of web 2.0. Although the speed of adoption may not be the same as the developed world, Africa is taking up changes in its own pace.

The in its document on guidelines for using web2.0 in library argue that Web2.0 tools can be used to promote services, share information, engage with users and network with colleagues, on a global scale. In this perspective, librarians and information professionals could not be left behind in utilizing the power of the web in communication.

says that web 2.0 can be used for serving the users in a better way and attracting the potential users towards the Library. Miller further cautions that if the libraries don't use the tools in their services, they are likely to be ignored by users.

2.4 PRIORITIZING USER NEEDS

The uses of web 2.0 in library are there to respond to the kind of services that young generation would want to have. University libraries have adopted the use of web2.0 to respond to the needs and demands of the patrons . It is therefore obvious the application of web 2.0 tool in libraries is demand driven and not technology driven as some scholars think. view the needs of today's users that require application of new kinds of interface around their demands and engaging them with their relevant information. stresses consideration of the needs, wants, and ideas and actively implementing them. It is about thinking about their experiences and design library services for them (not us). suggest involvement of the community in designing web 2.0 services, this means a user needs analysis has to be conducted to establish the actual needs by seeking their input and assistance before integrating web2.0 tools to your library service.

In this era, librarians are supposed to listen more, trust more, and be willing to relinquish some control to allow users of all ages and backgrounds to have the best library experience possible.

2.5 Benefits of Web 2.0

Among benefits of Web2.0 according to include reaching a vast audience in virtual sphere than would be possible at a physical location. Secondly, developing services in the sense that integrating Web2.0 services enables one to deliver services more efficiently in an online environment, for example this can be done using discussion groups on a blog or wiki and providing service updates or marketing event using twitter or YouTube. Thirdly, Raising awareness and promotion, Web2.0 tools can be updated

quickly and published instantly. In this scenario, there is no need to consult IT personnel to upload content. For example, by using blogs or micro-blogs, librarians can go straight to the

users with news and up to date information related to new services, materials or services

development. Fourthly, Professional development; Librarians use the internet to communicate, share ideas and offer support for a long time through use of web2.0 tools which present

opportunity for large scale professional collaboration and cooperation. argue that Web 2.0 is proving to be engines of change for academic libraries by helping library

professionals to organize their materials, enhance services towards the users and internal functions.

2.6 THE USE OF WEB 2.0 TOOLS IN SCHOLARLY COMMUNICATION

Web 2.0 tools are said to be more interactive and user centered communication technology. It enables participatory creation of knowledge and knowledge sharing in a simple and convenient way. despite the higher information literacy required to apply Web2.0 tools this technology is provided by many user friendly tools thus researchers can use the tools without the technology behind them. Gu & WidénWulff give examples of blogs which may provide a catalogue, tag or classification function for the users. By using this technology, researchers could join all kinds of virtual scientific communities and publish their findings in blogs, wikis, etc. Furthermore, they argue that Web 2.0 technology is creating a more

“Interactive” environment for scholarly communication. Through social media, researchers have more routes to express their ideas. They may present their opinions not only in writing but also through multimedia, including audio, broadcast, video, photo and so on. “Knowledge sharing” is one of the motivations of scholarly communication. To them, web 2.0 is a multidimensional which enables knowledge sharing to satisfy the needs of researchers in their discussions and communications with others on interdisciplinary subjects. A variety of Web 2.0 communication tools help to save researchers energy and offer wider channels to communication processes.

Web 2.0 tools can help in creating online Information Literacy programmes, customized information delivery, list services and tailor-made information services . Lecturer and students can use this platform to share scholarly information in a minimized effort and time.

further anticipate the movement of scholarly communication is gradually heading to social media thus the future scientific research will be more focused on collaboration. Following the development and the popularization of information technology, the online scholarly collaboration is easier to achieve.

2.7 ADOPTION OF WEB 2.0 TOOLS IN LIBRARIES

The type of Web 2.0 tools that a library could use depends on the needs of the patrons. There are commonly used web 2.0 tools as recommend web 2.0 tools which can enhance library services including wikis, blogs, RSS, IM, pod casts and vodcasts. To Tripathi, blogs can be used as promotional tools to inform clients of changes and additions to library services and collections.

2.8 INTEGRATING WEB 2.0 TOOLS INTO LIBRARY WEBSITE

The ever-increasing usage of social networks by teenagers have forced libraries to change their content and structure to integrate web 2.0 tools . These tools include Really Simple Syndication (RSS), Blogs, Wikis, user tagging sites (del.icio.us, furl, digg etc) instant messaging (IM), and social networking sites like Facebook, and Myspace, etc.

The library website is an entry point to enter and see the library resources, for example it links to Online Public Access Catalogue (OPAC) and e-resources. Scholars suggest the use of web2.0 tools to enhance delivery of library services. in the report

“Growing Knowledge: Access to research in east and Southern African Universities” the study discovered under utilization of e-resources because the tools which are used to market the resources are passive. He says *“Library websites vary from ‘about us’ pages, which simply present the library, to well develop and more user-centered resource portals.* Same observation was made by who view web 2.0 as a shift from a simply being a website and a search engine to shared networking space that drives work, research, education, responding to user’s expectations. The site should not be passive rather it should invite site visitors to comment, collaborate and edit information, creating a more distributed form of authority in which the boundaries between the site creator and the visitor are blurred

By recognizing the user-centered option, Harle in his study discovered that some academic libraries such as the University of Nairobi were in the process to integrate web2.0 tool to enhance their services. The use of web.20 means your services will be more visible and most utilized by users as suggested by that web2.0 tools underline features such as openness, interactivity, participatory and user-centered activities.

LIBRARIAN 2.0 SKILLS

Librarian working in Library 2.0 environment have a new brand name according to they are called nex-generation librarians or Librarian 2.0. Stephen perceives librarian 2.0 as a guru of information age who strive to understand the power of the Web 2.0 opportunities, learn the major tools of Web 2.0 and Library 2.0, Connect users to expert discussions, conversations and communities of practice and participates there as well. Use and develop advanced social networks to enterprise advantage, Connect with everyone using their communication modes of choice for example telephone, Skype, IM, SMS, e-mails, virtual reference and so on. Encourage user-driven metadata and user-developed content and commentary and understand the wisdom of crowds and the emerging roles and impacts of the blogosphere etc. Stephen suggests that librarians should prepare to become Librarian 2.0 now.

Among challenges of using this web 2.0 in our libraries in Africa include lack of technical knowhow that this paper is going to address in section four, this knowledge gap will be bridged by exposure to training by patrons both formal and informal. Experience has shown that most people acquire web 2.0 skills either from self learning, friend or close relatives. Knowledge sharing in this area could be done better if it could be taken up by Library and Information Studies (LIS) curriculums to be taught as a topic or a full course to enrich knowledge of librarians.

SUMMARY

The literature review reveals that the use of Web 2.0 in the libraries is increasing at an alarming pace. Libraries are using Facebook, LinkedIn, Wikis, blogs, RSS feeds, IM depending on their needs. The common purpose of using the tools is for personalizing outreach services. The application of these tools may help libraries offer their resources and services to the users in a proactive manner. Tripathi believes that the tools will definitely help in eliminating library ennui, which is all pervasive among the user community and needs to be eliminated.

3.0 METHODOLOGY

A survey design that employed a web based questionnaire for data collection was used in this study. The study examined the way Librarians in Tanzania are adopting and using Web 2.0 tools and social networks in their Libraries. The study surveyed Librarians and IT personnel of selected libraries that had shown interest in Web 2.0 tools by initiating some formal services in their institutions. The survey questionnaire link was sent to the librarians' email accounts. A total of 23 questionnaires were filled online and returned successfully and deemed useful for the data analysis on the study. The 23 returned questionnaire were used as basis for data analysis for the study.

4.0 PRESENTATION AND DISCUSSION OF FINDINGS

The objective of the study was to investigate the way libraries in Tanzania are adopting Web 2.0 tools and specifically looking at the factors that influence their use, prospects and challenges.

RESPONDENTS' BIOGRAPHICAL DATA

Out of 23 respondents, 16 (70%) were male and 7 (30%) were female. Respondent's age ranged

from 20 years to 50 years. Respondents with 20-29 years were 3 (14.3%), 30-39 were 11 (52.4%) and 40-50 were 7 (33.3%) and two respondents abstained. Respondents had different levels of education ranging from Certificate holders 1 (4.8%), while Diploma holders were 4 (19.0%), Advanced/Postgraduate Diploma 1 (4.8%), Bachelors Degree 3 (14.3%), Masters 11 (52.4%) and PhD was 1 (4.8%). Respondents were picked from all categories of libraries that is 17 (81.0%) were from academic libraries, 2 (9.5%)

were from public libraries and 2 (9.5%) were from special libraries. No respondents were drawn from schools and research / documentation centers. Two did not indicate their library categories.

OBJECTIVE BASED RESPONSES

Respondents were asked to indicate the types of web 2.0 tools they are currently registered with and use their libraries. Figure:1 below show the web 2.0 available in libraries.

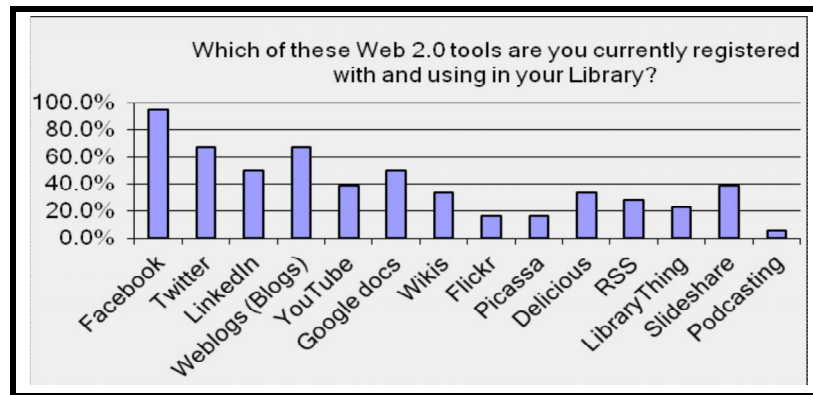


Fig:1 Web 2.0 tools available in Libraries

Facebook was the highest used tool 17(94.4%), Twitter and weblogs were both at 12 (66.7%) followed by Google docs 9(50%). The least used web 2.0 was Podcasting. The response shows a good mix of tools being used by the Libraries in Tanzania.

FREQUENCY OF USE OF WEB 2.0 TOOLS

Respondents were asked to indicate on a frequency of daily, weekly, monthly and once in a while their use of web 2.0 tools. Table: 3 below indicates the results. Facebook was the most frequently used tool as 15 out of 18 used it on daily basis. Facebook has been very popular to the youth and adults.

How often do you use the above tools?						
Answer Options	Daily	Weekly	Monthly	Once in a while	Rating Average	Response Count
Facebook	15	2	0	0	1.12	17
Twitter	3	4	2	3	2.42	12
LinkedIn	4	3	2	2	2.18	11
Web (blogs)	4	6	1	4	2.33	15
YouTube	2	3	2	1	2.25	8
Google docs	6	2	2	1	1.82	11
Wikis	2	3	1	1	2.14	7
Flickr	0	1	0	3	3.50	4
Picassa	1	2	0	1	2.25	4
Delicious	0	4	1	2	2.71	7
RSS	3	0	0	1	1.75	4
LibraryThing	2	1	0	2	2.40	5
Slideshare	1	3	2	1	2.43	7
answered question						18
skipped question						5

Table:3 Frequency of use of web 2.0 tools

FACTORS THAT MOTIVATE THE USE OF WEB 2.0

Most respondents at 12 (66.7%) identified availability of free open source software as main factors that motivate them to use web 2.0 tools in the library. 9(50.0%) felt the ease of use of web 2.0 tools while 7(38.9%) felt Enhanced internet connectivity in Tanzania and also that it was trendy for libraries to embrace technology. Five respondents did not answer this question. The finding reveals that many users are using these tools because they do not involve any cost in using them, anyone can use the tools provided that he or she has a minimum knowledge of internet and the World Wide Web. Because of their ease of use, to sign up for a Facebook account for example one is supposed to enter this URL www.facebook.com and then add personal details to enable registration. After that you can start posting and sharing. Curiously many people did not feel that reduced internet cost in Tanzania was a motivating factor and only 15% agreed to it. These tools are heavily used in the areas where the internet connectivity is fine, libraries with a good internet connectivity will be pretty much motivated to introduce web 2.0 services to communicate with their users. Please see other motivating factors on the figure below and how they were rated.

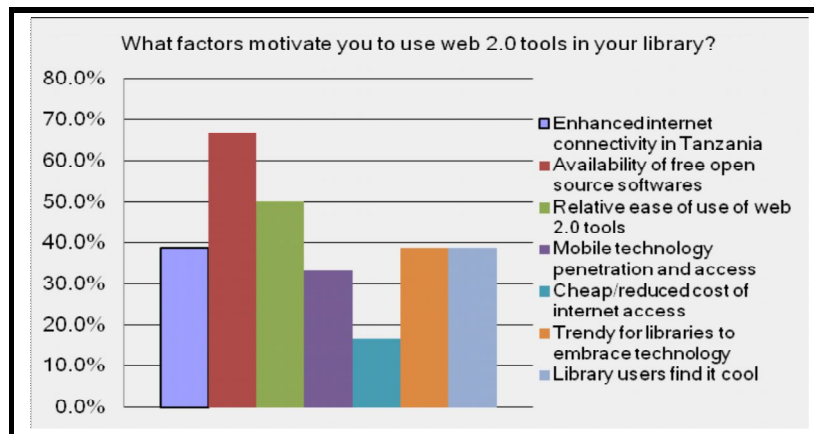


Figure: 2 Factors motivating use of Web 2.0 tools

PURPOSE OF USING WEB 2.0 TOOLS

According to figure 3 below, it shows that Sharing of resources is the main purpose of using web 2.0 in most libraries 14(77.8%), Scholarly Communication and promotion of library services were both rated 12(66.7%) followed by news and information at 10(55.6%). Training of users, Reference services and Professional networking were rated at 9(50.0%). None of the respondent saw Book discussion as a purpose of using web 2.0 tools. Maybe the respondents misunderstood this question and therefore could not relate the Physical book to technology. Five participants did not respond to this question.

Figure 3 below shows further details.

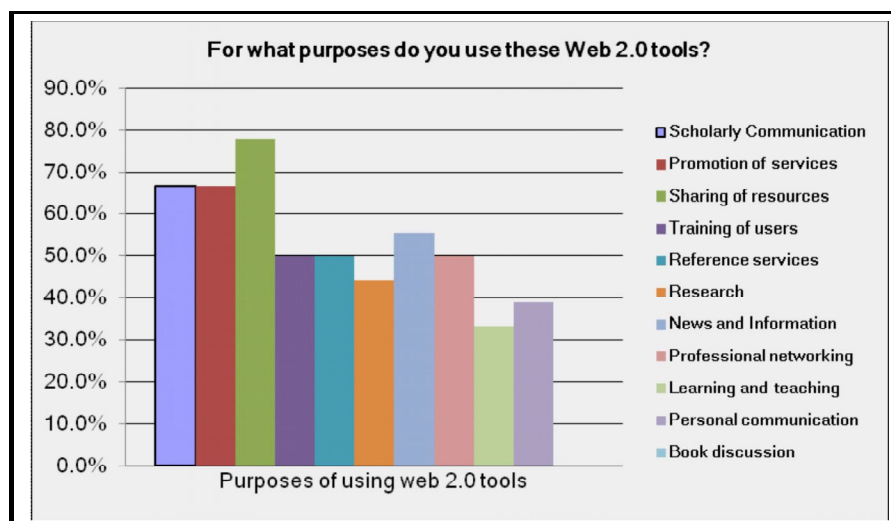


Fig: 3 Purposes of using web 2.0 tools

The above scenario indicates that Librarians can use these tools to share information with their users, communicate scholarly information and market or promote different library services. These tools have proven to be efficient in displaying latest news and information pertaining to professionalism and general awareness. For example the university of Dar es Salaam ([udsm lib](#)) and Dar es Salaam University College of Education ([DUCE](#)) libraries use facebook pages to communicate the same. Other institutions which use facebook are Tanzania Library Service Board ([TLSB](#)), Institute of Rural Development Planning ([IRDP](#)) and Aga Khan University IED EA [AKU IEDEA](#). The tools can also be used to share e-resources in Tanzania especially among members of the Consortium of Tanzania University and Research Libraries (COTUL) which has also integrated web 2.0 tools in its website see www.cotul.or.tz.

CONFIDENCE IN USING WEB 2.0

The findings indicate that 58% of the respondents are confident in using web 2.0 tools while 37% had an average confidence, only 5% responded to have low confidence of using the tools. It appear that a large number of librarians have confidence in using the tools and that explains why a number of them have been able to uptake several of the web 2.0 tools and implemented them in their work places as indicated in figure 1 above.

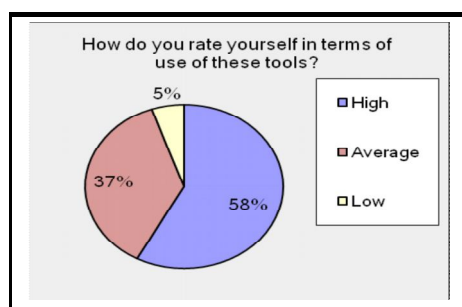


Fig: 4 Confidence in using Web 2.0 tools

ADVANTAGES OF USING WEB 2.0 TOOLS IN THE LIBRARY

Among top three advantages realized by the libraries using web 2.0 tools were felt to be enhancing awareness of library resources 14(77.8%), this was followed by improved staff-client communication 13(72.2%) and the interest generated in the library by users 12(66.7%). It is easy for librarians to use web 2.0 tools because it does not need administrative rights from a web manager a culture which is commonly used in web 1.0 environment, any assigned librarian can update current information in a wiki or a blog very easily and conveniently. The

second advantage was improved communication between staff and clients in the sense that, Web 2.0 are not too formal to restrict flow of communication for example the use of chat windows by librarians enable librarian-patron communication in synchronous situation while exchanging short texts and sharing common understanding during conversation. As patrons communicate with librarians, they begin generating interest of the library due to social connectivity which is enhanced by communication.

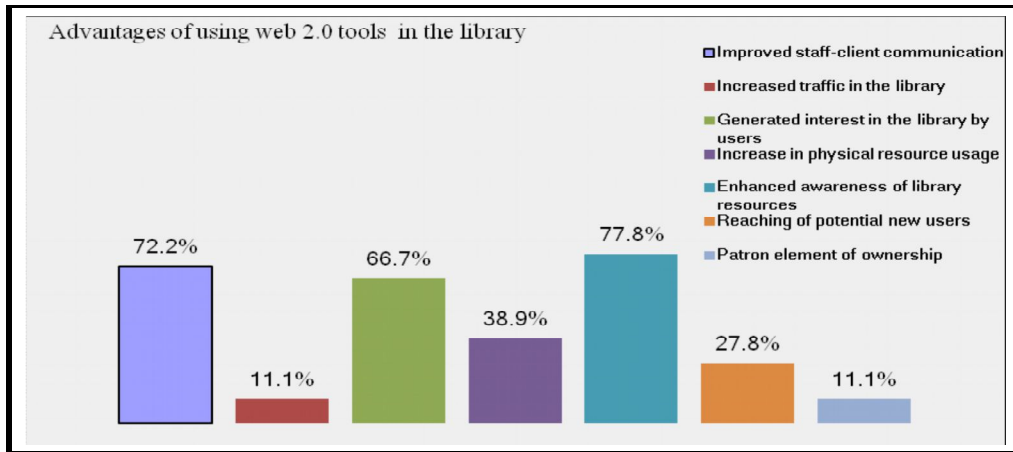


Fig: 5 Advantages of using web 2.0 tools

POLICY GOVERNING USE OF WEB 2.0

4(22.2%) respondents are restricted by their institutions to use web 2.0 tools during work hours. Researchers could not establish the purpose of use whether those who encounter these restrictions use the tools for their personal communication such as chatting with friends during work hours. 14 (77.8%) are not restricted informally or formally by a policy.

Does your organization impose restrictions during work hours on use of web 2.0 tools in your institutions?		
Answer Options	Response Percent	Response Count
Yes	22.2%	4
No	77.8%	14
Do not know	0.0%	0
<i>answered question</i>		18
<i>skipped question</i>		5

Table 4: Policy governing restriction of use of web 2.0 at work

Respondent were also asked if they were aware of any policy governing the use of web 2.0 tool and networking tools for the entire organization. 6(33.3%) agreed that the

availability of a policy 11(61.1%) indicated no policy and 1(5.6%) did not know and five did not respond. Most academic institutions have ICT policies which necessarily do not include any element of use of the newer technology e.g. web 2.0 tools.

Is there an ICT policy governing use of web 2.0 and networking tools in your organization?		
Answer Options	Response Percent	Response Count
Yes	33.3%	6
No	61.1%	11
do not know	5.6%	1
<i>answered question</i>		18
<i>skipped question</i>		5

Table: 5 Policy governing use of web 2.0 at work

The management of some institutions motivate their staff to use web 2.0 tools for communication and sharing resources and information. Findings show that 13(72.2%) are encouraged by managements while 4(22.2%) are not motivated by their management and 1 (5.6%) didn't know please see the figure 6 below:

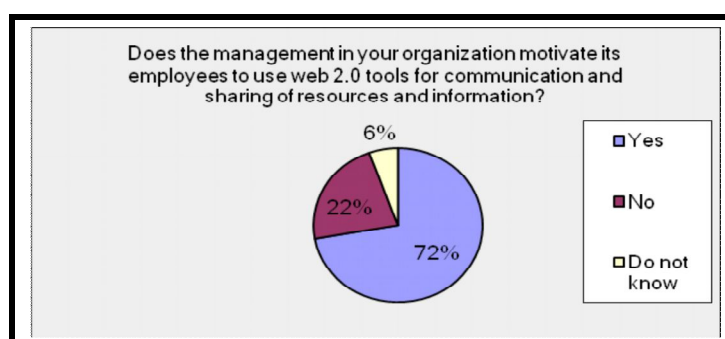


Fig: 6 Management motivation to use web 2.0 tools in communication

There is an interesting trend on the above findings, 77.8% of respondents indicated they are not restricted by their institutions to using web 2.0 tools and almost similar number 72.2% indicated encouragement from their managements to use web 2.0 tool. That is to say, there is a big relationship between non-restricting the use and motivating the use of the web 2.0. Likewise data show that there is 4(22.2%) who indicated restricted use of web 2.0 tools in their institution with a similar number and percentage also showing none motivation by their management to use the tools

CHALLENGES OF USING WEB 2.0 TOOLS

Among challenges which were identified by respondents, lack of reliable power sources was ranked high by 83.3% followed by unstable internet access 55.6%. Lack of technical knowledge on use of web 2.0, users who are not ICT savvy and low uptake of web 2.0 use by patrons were rated 44.4%. This means respondents were concerned with the physical infrastructure and their exposure to knowledge of web 2.0 tools. The unstable power source is an accurate indicator of residents of Tanzania who experience frequent power disconnections and long rationing hours due to over reliance on hydro-generated power. This is also supported by recommendations made by Lwoga (Lwoga, 2012)

I face the following challenges when using web 2.0 tools.		
Answer Options	Response %	Response
Lack of Technical knowledge	44.4%	8
Lack of access to the tools	16.7%	3
Unstable internet access	55.6%	10
Unstable power source	83.3%	15
Restrictive ICT policies in my organization	11.1%	2
Inadequate time	22.2%	4
Budget constraints	22.2%	4
Unresponsive and stereotype management	11.1%	2
Users who are not ICT savvy	44.4%	8
Low uptake of web 2.0 use by patrons	44.4%	8
Other (please specify)		0
<i>answered question</i>		18
<i>skipped question</i>		5

Table: 6 Challenges of web 2.0

IMPROVING THE USE OF WEB 2.0 TOOLS IN THE LIBRARY

The Researchers wanted to establish from the respondents, how they could improve the use of web 2.0 tools in their libraries. Policy formulations that address emerging technology were rated high by 83.3%. The question that had asked about policy realized that majority of the Libraries at 61.1% did not have any policy. 66.7% of respondents wanted well developed human capacity to support web 2.0 implementation and sustainability and 61.1% indicated adequate budget dedicated to newer technologies will improve use of these tools. Adequate induction to library staff on web 2.0 tools and continuous exposure and training of users to effectively identify content easily had both been rated 55.6%. In essence, the need for

having a legal document guiding the use of web 2.0 was deemed to be necessary in improving the use of web 2.0 in libraries. Continuous human capacity development (Librarians, IT, Users) and budget is necessary for better management/use of resources and in acquisition of library ICT infrastructure respectively. A sizeable number of respondents 50% felt that full engagement and support of Top Management in web 2.0 matters was crucial. It would be difficult to establish a working web 2.0 services if this group is not supportive of the initiative. However in an earlier question seeking to establish the top management encouragement of web 2.0 tools use, majority at 77.2% were in the affirmative. This therefore could explain the low response in this question as majority already have that commitment from their Top Managers.

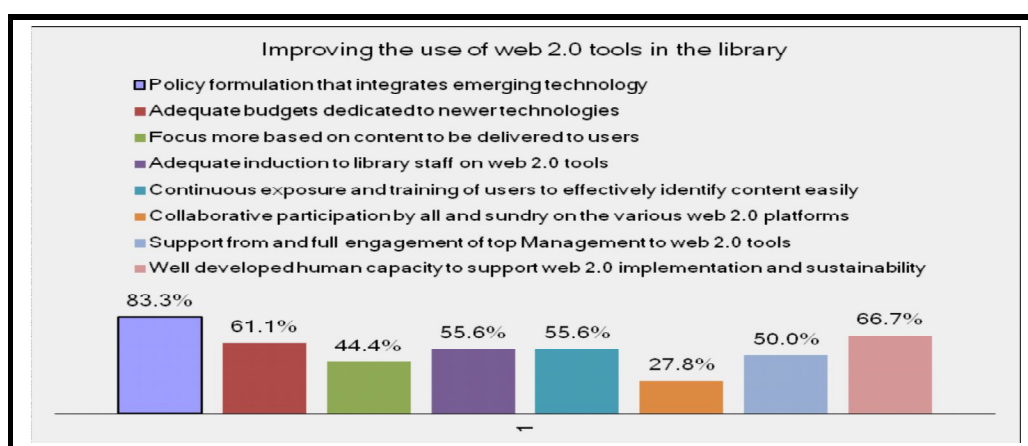


Fig: 7 improving use of Web 2.0 tools in Library.

5.0 CONCLUSION AND RECOMMENDATION

Web 2.0 tools though relatively a new concept in Tanzanian Libraries seems to have gained considerable presence in the last few years. Of significance is the fact that many Tanzanian librarians exhibit confidence in their abilities to adopt and use many of these tools. It can also be clearly deduced from the study that there were various advantages that have been realized by the Librarians in their work places amongst them being that adoption of Web 2.0 tools have led to enhancement in awareness of Library resources by patrons. Web 2.0 use has also improved communication between staff and patrons as well as generating interest in the Library by users. If patrons know that they can have IM synchronized conversation with the librarian and that with RSS feed they can know what is new in the collection or get news items first hand then that improved relationship can also translate into improved services and confidence in each party. Despite the above, there is still remarkable

work that needs to be done for these tools to have required penetration in most libraries. Among the most notable was the need for continuous training of both the Librarians or information handlers and the users to enable the impact to be felt. Additional challenges involved unreliable power and unstable internet access two most critical issues that have continued to plague the ICT penetration in Sub-Saharan Africa more so the Eastern part where Tanzania is located.

For impact and successful adoption of these tools in Tanzanian Libraries, this study makes the following recommendations.

1. Institutions in Tanzania should develop policies that address adoption and use of emerging/newer technologies in Library services.
2. There is need to have a well developed human capacity at institutional levels to support Web 2.0 implementation and sustainability.
3. Ensure availability of reliable power by investing in generators, solar and other alternative power sources.
4. Investment in dedicated internet bandwidths to ensure uninterrupted internet access.
5. Users should be trained continuously on the application and use of Web 2.0 tools in order to generate impact.
6. Need for dedicated and adequate budgets geared towards Web 2.0 technologies initiatives.
7. The Top Managers of Libraries and Institutions should be fully involved and support the adoption of Web 2.0 for success to be realized.
8. Librarians to forge collaborative efforts with other stakeholders e.g. Faculty to promote various benefits of using Web 2.0 tools for study and teaching and with students on how they can use the tools to enhance their research and information resource identification. In case of a public library the collaboration could be on improving communication and starting conversations for enhancing certain aspects of the community or even for entertainment.

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